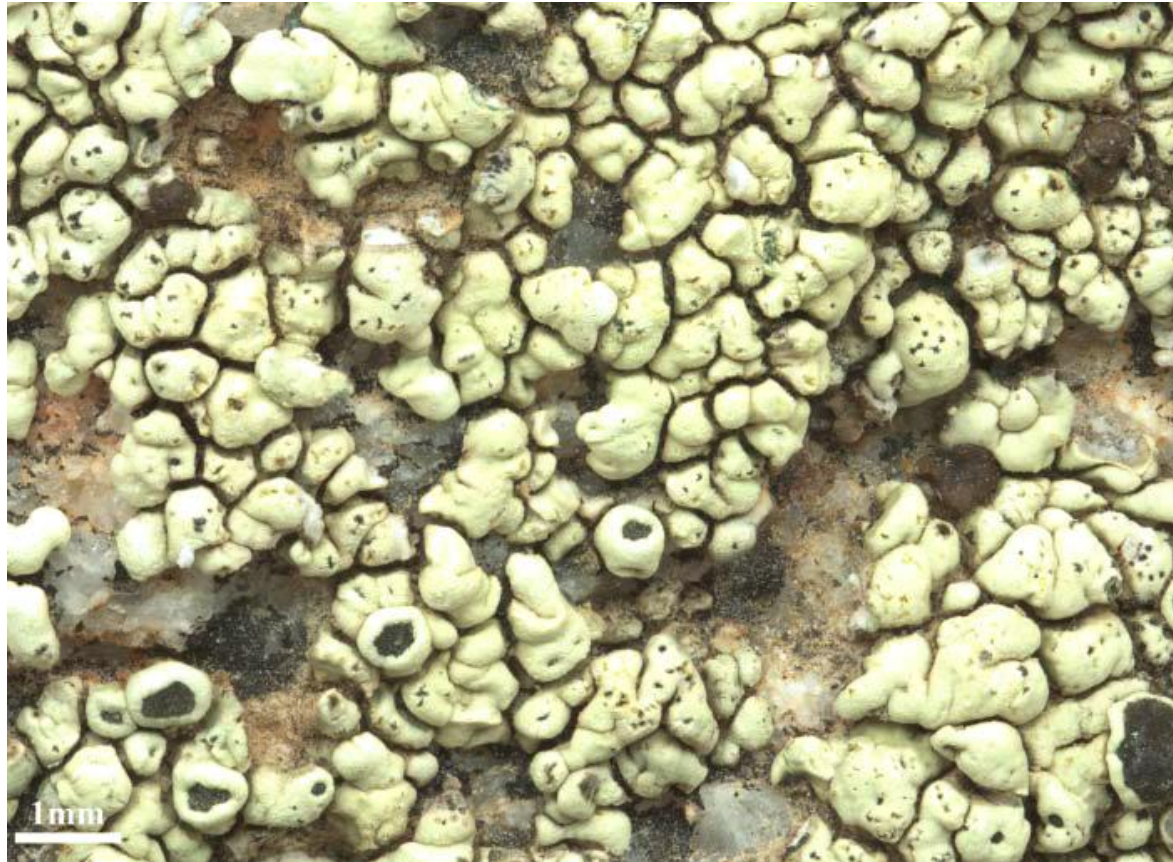


***Dimelaena oreina* in the Joshua Tree National Park (California, U.S.A.)**

Map collection



Dimelaena oreina. Photo by Tim Wheeler

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Abstract – *Dimelaena oreina* is a cosmopolitan species. It is common at higher elevations throughout California and it is an indicator of high elevation montane saxicolous lichen habitat, though in southern California there are several disjunct relic populations scattered lower elevations. It usually grows on very hard rock like undecayed granite boulders. It is rare species in the Mojave Desert in Joshua Tree. The map of distribution of *D. oreina* in Joshua Tree National Park is presented. We compiled a detailed list of records based on GPS data.

Key words – *Dimelaena oreina*, lichens, map of distribution, montane saxicolous lichen habitat, Joshua Tree, Mojave Desert

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***Dimelaena oreina* (Ach.) Norman**

DESCRIPTION. – Mayrhofer and Sheard 2004.

WORLD DISTRIBUTION. – Cosmopolitan.

SUBSTRATE. – Non-calcareous rock; on basalt, gneiss, and granite in Joshua Tree.

NOTES. – *Dimelaena oreina* is common at higher elevations throughout California. It is an indicator of high elevation montane saxicolous lichen habitat (though in southern California there are disjunct relic populations scattered in the coastal ranges at lower elevations including the Santa Ana and Santa Monica Mountains). It usually grows on very hard rock like undecayed granite boulders. It is documented by 6 collections in the Mojave Desert in Joshua Tree. It is an indicator with *Pleopsidium flavum* of a relictual high elevation saxicolous lichen community in Joshua Tree. *Dimelaena oreina* occurs from 4189 feet (1277 m) on basalt columns on north side of Malapai Hill to 5366 feet (1636 m) on Queen Mountain. If climate change generates lower rainfall and greater aridity (de Buys 2011), this relictual community can only go higher in the park or eventually become extirpated. The chemotype of *D. oreina* in Joshua Tree produces usnic acid, stictic acid complex, menegazzaic acid, with a trace of norstictic acid (Michalová 2012).

DISTRIBUTION. – Lost Horse Mountain, Malapai Hill (on basalt), Queen Mountain, ridge northeast of Quail Mountain, upper Covington Flats.

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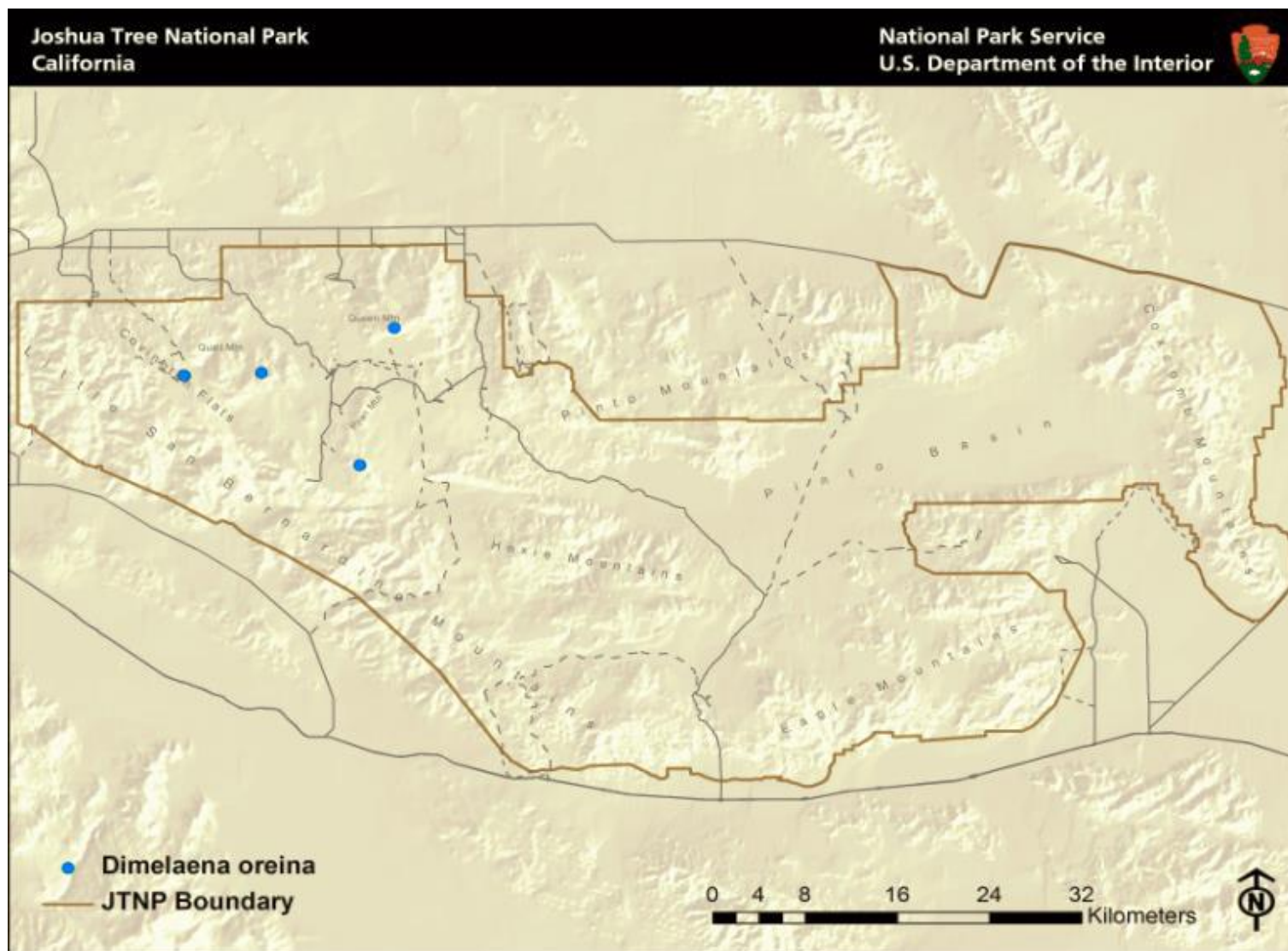
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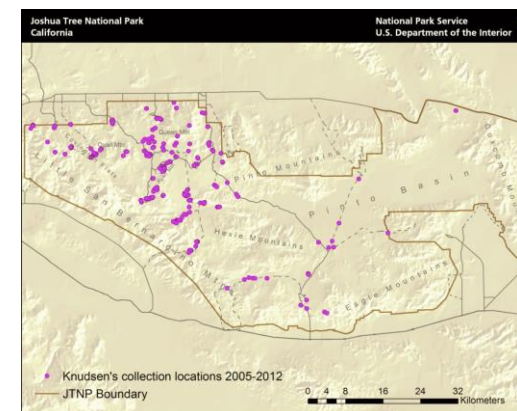
Dimelaena oreina



Known distribution of *Dimelaena oreina* in JTNP.



Location of Joshua Tree National Park in Southern California



All 238 of Knudsen's and Kocourková's lichen collection sites throughout Joshua Tree National Park between the years of 2005 and 2012.

Map collection, maps made in software ArcGIS, 10.1; electronic form, file type pdf.